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IN THE CLAIMS

Please amend the claims as follows:

1-20. (CANCELED)

21. (CURRENTLY AMENDED) A process for converting bulk nickel metal to nickel sulfate comprising the steps of:

1) providing the bulk nickel metal to a system having at least one enclosed reactor column containing a bulk nickel metal;

2) supplying sulfuric acid at a first pressure to the system into each of said at least one enclosed reactor column, said first pressure exceeding ambient pressure, said sulfuric acid having a concentration sufficient to dissolve said bulk nickel metal;

3) supplying an oxygen containing gas at a second pressure to the system into each of said at least one enclosed reactor column, said second pressure exceeding said first pressure, said supplying oxygen step producing said oxygen mixing with said sulfuric acid to form an oxygen-containing sulfuric acid solution-nickel sulfate solution;
and

4) reacting said oxygen-containing sulfuric acid solution with bulk nickel metal in the enclosed reactor to produce nickel sulfate solution, wherein the oxygen-containing sulfuric acid solution is controlled within a pH range, wherein the difference between the maximum pH and the minimum pH of the pH range is 5.9 or less.

22-45. (CANCELED)

46 (NEW) The process of claim 21, wherein the pH range has a minimum pH of greater than or equal to 0.1 and a maximum pH of less than or equal to 6.0.

47 (NEW) The process of claim 21, wherein the difference between the maximum pH and the minimum pH of the pH range is 2.5 or less.

48 (NEW) The process of claim 21, wherein the pH of the oxygen-containing sulfuric acid solution is controlled to a pH of less than 6.0.

49. (NEW) The process of claim 21, wherein the pH range is 0.1 to 6.0.

50. (NEW) The process of claim 21, wherein the pH range is 2.5 to 4.0.

51. (NEW) The process of claim 21, wherein pH of the oxygen-containing sulfuric acid solution is controlled to a pH of less than 4.0.

52. (NEW) The process of claim 21, wherein greater than 1% of the bulk nickel is reacted per hour.

53. (NEW) The process of claim 21, wherein the oxygen-containing sulfuric acid solution reacts with bulk nickel metal at a temperature of 95 degrees Celsius or less.

54. (NEW) The process of claim 53, wherein greater than 1% of the bulk nickel is reacted per hour.

55. (NEW) The process of claim 21, wherein oxygen gas is supplied to the system at a first pressure and sulfuric acid supplied to the system at a second pressure.

56. (NEW) The process of claim 21, wherein the first pressure differs from the second pressure by an amount between 1 psi and 140 psi.

57. (NEW) The process of claim 21, wherein the first pressure is in a range of about 10 psi to about 149 psi and the second pressure is in a range of about 11 psi to about 150 psi.

58. (NEW) The process of claim 21, wherein the bulk nickel metal has an average size greater than .1 mm.

59. (NEW) The process of claim 21, wherein the bulk nickel metal has an average size of greater .254 cm in diameter.

60. (NEW) The process of claim 21, wherein the bulk nickel metal has an average size of .245 cm to 3.81 cm in diameter.

61. (NEW) The process of claim 21, wherein the surface area of the bulk nickel is .20 square centimeters or greater.

62. (NEW) The process of claim 21, wherein the bulk nickel metal comprises 99.99% nickel.

63. (NEW) The process of claim 21, wherein said nickel sulfate solution contains a concentration of nickel of about 10 weight percent.

64. (NEW) The process of claim 21, wherein said step of supplying oxygen to the system comprises supplying air to the system.

65. (NEW) A process for converting bulk nickel metal to nickel sulfate comprising the steps of:

- 1) providing the bulk nickel metal to a system having at least one enclosed reactor;
- 2) supplying sulfuric acid to the system;
- 3) supplying oxygen to the system, said oxygen mixing with said sulfuric acid to form an oxygen-containing sulfuric acid solution; and

4. reacting said oxygen-containing sulfuric acid solution with the bulk nickel metal in the enclosed reactor to produce nickel sulfate solution, wherein the temperature during the reaction is less than 95 degrees Celsius.

66. (NEW) The process of claim 41, wherein greater than 1% of the bulk nickel is reacted per hour.

67. (NEW) The process of claim 41, wherein the bulk nickel metal has an average size greater than .1 mm in diameter.

68 (NEW) The process of claim 41, wherein the bulk nickel metal has an average size of greater .254 cm in diameter.

69. (NEW) A continuous process for converting bulk nickel metal to nickel sulfate comprising the steps of:

1.) providing bulk nickel metal to a system having at least one enclosed reactor;

2) supplying sulfuric acid to the system;

3) supplying oxygen to the system, said oxygen mixing with said sulfuric acid to form an oxygen-containing sulfuric acid solution; and

4.) reacting the oxygen-containing sulfuric acid solution with the bulk nickel metal in the enclosed reactor at a controlled pH, wherein the temperature is less than 95 degrees Celsius and wherein the oxygen-containing sulfuric acid is a controlled

within a pH range, the difference between the maximum pH and the minimum pH of the controlled pH range being 2.5 or less.